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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,565	01/28/2002	Jerry Wagner	1051-015F	5446

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EXAMINER
SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/058,565	WAGNER, JERRY	
	Examiner	Art Unit	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-4 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that the composition is "adapted" to meet FRMC standards for use in a clean room. The scope of the claim is confusing because it is not clear what is meant by "adapted". How must the composition be adapted to meet the standards for a clean room? Clarification is requested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Redondo et al. (U.S. 6,552,112).

Redondo et al. disclose halogen-free flame retardant composition comprising 30-80% magnesium hydroxide that is coated with anionic surfactant and which possesses surface area of 7.1 m^2/g and average particle size of 16000 A and heterophasic, i.e. graft, copolymers of polypropylene with ethylene/propylene which comprise at least 70% polypropylene (col.1, lines 24-25, col.3, line 61-col.4, line 3, col.4, lines 19-21 and 29-30, col.6, lines 12-14, 17, and 39-45, col.8, lines 59-63, col.9, lines 4-8, and col.11, lines 9-25). Although there is no disclosure of the strain associated with the magnesium hydroxide, it is disclosed that the magnesium hydroxide utilized is known under the tradename Kisuma 5A which is identical to the magnesium hydroxide used in the present invention. Thus, it is clear that the magnesium hydroxide utilized in Redondo et al. inherently possesses all the properties, including strain, as presently claimed.

Although there is no disclosure that the composition meets FMRC standards for use in a clean room, given that Redondo et al. disclose composition identical to that presently claimed, it is clear that such composition would inherently meet the FMRC standards for use in a clean room.

In light of the above, it is clear that Redondo et al. anticipate the present claims.

5. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Keough et al. (U.S. 5,698,323) taken in view of the evidence in Ficker et al. (U.S. 4,882,380).

Keough et al. disclose flame retardant composition comprising magnesium hydroxide coated with anionic surfactant, i.e. stearic acid, which has strain in <101> direction of no more than $3x10^3$, crystallite size in <101> direction of more than 800 A, and surface area less than 20 m^2/g and polypropylene which has melt flow of 0.5-20 dg/min. Based on all ingredients present

in the composition, it is calculated that the composition comprises approximately 22% (50/225)-74% (300/407) magnesium hydroxide (col.1, line 4,col.2, lines 27-28 and 46-49, col.5, lines 5, lines 33-34, 38-40, and 55-65, and col.6, lines 8-14).

With respect to the polypropylene, Keough et al. refers to Ficker et al. in order to describe specific types of polypropylene utilized. Ficker et al. disclose the use of 20-45% ethylene propylene copolymer incorporated into, i.e. grafted to, 55-80% propylene homopolymer (col.1, lines 15-20 and 44-46 and col.6, lines 40-49).

Although there is no disclosure that the composition meets FMRC standards for use in a clean room, given that Keough et al. disclose composition identical to that presently claimed, it is clear that such composition would inherently meet the FMRC standards for use in a clean room.

In light of the above, it is clear that Keough et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori (U.S. 5,747,574) in view of Rolland (U.S. 4,948,669).

Kanamori discloses flame retarded composition comprising magnesium hydroxide that is coated with anionic surfactant and which possesses surface area of 5 m^2/g and particle size of not less than 6000 A but not more than 10000 A and polypropylene (col.1, lines 5-9 and 66, col.4, lines 20-21, 27-31, and 37-41, and col.6, line 4). It is disclosed that the composition comprises 60-120 parts magnesium hydroxide per 100 parts resin from which it is calculated that the composition comprises approximately 37-54% magnesium hydroxide. Although there is no disclosure of the strain associated with the magnesium hydroxide, it is disclosed that the magnesium hydroxide utilized is known under the tradename Kisuma 5B which is identical to the magnesium hydroxide used in the present invention. Thus, it is clear that the magnesium hydroxide utilized in Kanamori intrinsically possesses all the properties, including strain, as presently claimed.

The difference between Kanamori and the present claimed invention is the requirement in the claims of specific type of polypropylene.

Rolland, which is drawn to halogen-free flame retardant materials, discloses the use of polypropylene grafted with ethylene-propylene copolymer in order to produce flame retarded composition with good electrical, physical, and flame retardant properties which passes heat shock test without excessive loss of impact resistance (col.1, lines 11-14, 33-34, and 45-47 and col.2, lines 20-24).

Although there is no disclosure in either Kanamori or Rolland that the composition meets FMRC standards for use in a clean room, given that the combination of Kanamori with Rolland discloses composition identical to that presently claimed, it is clear that such composition would intrinsically meet the FMRC standards for use in a clean room.

In light of the motivation for using specific polypropylene disclosed by Rolland as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polypropylene in the composition of Kanamori in order to produce composition with good electrical, physical, and flame retardant properties which passes heat shock test without excessive loss of impact resistance, and thereby arrive at the claimed invention.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori (U.S. 5,747,574) in view of Kasahara et al. (U.S. 4,734,448).

Kanamori discloses flame retarded composition comprising magnesium hydroxide that is coated with anionic surfactant and which possesses surface area of 5 m^2/g and particle size of not less than 6000 A but not more than 10000 A and polypropylene (col.1, lines 5-9 and 66, col.4, lines 20-21, 27-31, and 37-41, and col.6, line 4). It is disclosed that the composition comprises 60-120 parts magnesium hydroxide per 100 parts resin from which it is calculated that the composition comprises approximately 37-54% magnesium hydroxide. Although there is no disclosure of the strain associated with the magnesium hydroxide, it is disclosed that the magnesium hydroxide utilized is known under the tradename Kisuma 5B which is identical to the magnesium hydroxide used in the present invention. Thus, it is clear that the magnesium

hydroxide utilized in Kanamori intrinsically possesses all the properties, including strain, as presently claimed.

The difference between Kanamori and the present claimed invention is the requirement in the claims of specific type of polypropylene.

Kasahara et al., which is drawn to propylene polymer composition, disclose the use of copolymer comprising 70-95% polypropylene grafted with 5-30% ethylene-propylene copolymer wherein the copolymer has melt index of 0.1-50 g/10 min in order to produce composition with good whitening resistance, impact resistance, rigidity, and flowability (col.1, lines 43-45 and 55-61, col.2, lines 10-13, and col.3, lines 36-37).

Although there is no disclosure in either Kanamori or Kasahara et al. that the composition meets FMRC standards for use in a clean room, given that the combination of Kanamori with Kasahara et al. discloses composition identical to that presently claimed, it is clear that such composition would intrinsically meet the FMRC standards for use in a clean room.

In light of the motivation for using specific polypropylene disclosed by Kasahara et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polypropylene in the composition of Kanamori in order to produce composition good whitening resistance, impact resistance, rigidity, and flowability, and thereby arrive at the claimed invention.

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redondo et al. (U.S. 6,552,112) in view of Kasahara et al. (U.S. 4,734,448).

Redondo et al. disclose halogen-free flame retardant composition comprising 30-80% magnesium hydroxide that is coated with anionic surfactant and which possesses surface area of 7.1 m^2/g and average particle size of 16000 A and heterophasic copolymers of polypropylene with ethylene/propylene which comprise at least 70% polypropylene (col.1, lines 24-25, col.3, line 61-col.4, line 3, col.4, lines 19-21 and 29-30, col.6, lines 12-14, 17, and 39-45, col.8, lines 59-63, col.9, lines 4-8, and col.11, lines 9-25). Although there is no disclosure of the strain associated with the magnesium hydroxide, it is disclosed that the magnesium hydroxide utilized is known under the tradename Kisuma 5A which is identical to the magnesium hydroxide used in the present invention. Thus, it is clear that the magnesium hydroxide utilized in Redondo et al. intrinsically possesses all the properties, including strain, as presently claimed.

The difference between Redondo et al. and the present claimed invention is the requirement in the claims of specific type of polypropylene copolymer.

Redondo et al. disclose the use of heterophasic polymers of polypropylene with ethylene/propylene, however, there is no explicit disclosure of specific graft copolymer as presently claimed.

Kasahara et al, which is drawn to propylene polymer composition, disclose the use of copolymer comprising 70-95% polypropylene grafted with 5-30% ethylene-propylene copolymer wherein the copolymer has melt index of 0.1-50 g/10 min in order to produce composition with good whitening resistance, impact resistance, rigidity, and flowability (col.1, lines 43-45 and 55-61, col.2, lines 10-13, and col.3, lines 36-37).

Although there is no disclosure in either Redondo et al. or Kasahara et al. that the composition meets FMRC standards for use in a clean room, given that the combination of

Redondo et al. with Kasahara et al. discloses composition is identical to that presently claimed, it is clear that such composition would intrinsically meet the FMRC standards for use in a clean room.

In light of the motivation for using specific polypropylene disclosed by Kasahara et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polypropylene in the composition of Redondo et al. in order to produce composition good whitening resistance, impact resistance, rigidity, and flowability, and thereby arrive at the claimed invention.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Datta et al. (U.S. 4,999,403) disclose graft copolymer comprising functional ethylene-propylene copolymer and polypropylene.

Elsner et al. (U.S. 5,843,389) disclose flame retardant composition comprising magnesium hydroxide and polypropylene, however, there is no disclosure of graft copolymer as presently claimed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
June 6, 2003